

# Raw Sequence Listing Error Summary

## ERROR DETECTED SUGGESTED CORRECTION

SERIAL NUMBER: 09/486,625

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1      Wrapped Nucleics      The number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 2      Wrapped Aminos      The amino acid-number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 3      Incorrect Line Length      The rules require that a line not exceed 72 characters in length. This includes spaces.
- 4      Misaligned Amino Acid Numbering      The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs between the numbering. It is recommended to delete any tabs and use spacing between the numbers.
- 5      Non-ASCII      This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.  
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.
- 6      Variable Length      Sequence(s)      contain n's or Xaa's which represented more than one residue.  
As per the rules, each n or Xaa can only represent a single residue.  
Please present the maximum number of each residue having variable length and indicate in the (ix) feature section that some may be missing.
- 7      PatentIn ver. 2.0 "bug"      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s)     . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 8      Skipped Sequences (OLD RULES)      Sequence(s)      missing. If intentional, please use the following format for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X:  
(i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")  
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:  
This sequence is intentionally skipped  
  
Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).
- 9      Skipped Sequences (NEW RULES)      Sequence(s)      missing. If intentional, please use the following format for each skipped sequence.  
<210> sequence id number  
<400> sequence id number  
000
- 10      Use of n's or Xaa's (NEW RULES)      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 11      Use of <213>Organism (NEW RULES)      Sequence(s)      are missing this mandatory field or its response.
- 12      Use of <220>Feature (NEW RULES)      Sequence(s)      are missing the <220>Feature and associated headings.  
Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"  
Please explain source of genetic material in <220> to <223> section.  
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules)
- 13      PatentIn ver. 2.0 "bug"      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing).  
Instead, please use "File Manager" or any other means to copy file to floppy disk.

1643

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/486,625

DATE: 11/16/2000  
 TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

Does Not Comply  
 Corrected Diskette Needed

3 <110> APPLICANT: Ayyavoo, Velpandi  
 4 Nagashunmugam, Thandavarayan  
 5 Weiner, David B.  
 6 University of Pennsylvania  
 9 <120> TITLE OF INVENTION: ATTENUATED VIF DNA IMMUNIZATION CASSETTES FOR GENETIC  
 10 VACCINES  
 12 <130> FILE REFERENCE: UPAP-0263  
 14 <140> CURRENT APPLICATION NUMBER: US/09/486,625  
 15 <141> CURRENT FILING DATE: 2000-09-13  
 17 <160> NUMBER OF SEQ ID NOS: 46  
 19 <170> SOFTWARE: PatentIn Ver. 2.0

*error  
throughout*

# ERRORED SEQUENCES

21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 190  
 23 <212> TYPE: PRT  
 24 <213> ORGANISM: Artificial Sequence  
 26 <220> FEATURE:  
 27 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence  
 29 <400> SEQUENCE: 1  
 30 Met Glu Asn Arg Trp Glp Val Met Ile Val Trp Gln Val Asp Arg Met  
 E--> 31 1 2 5 10 15 20  
 E--> 32 15  
 34 Arg Ile Arg Thr Trp Asn Ser Leu Val Lys His His Met Tyr Val Ser  
 E--> 35 20 25  
 E--> 36 30  
 38 Lys Lys Ala Arg Trp Phe Tyr Arg His His Tyr Glu Ser Pro His Pro  
 E--> 39 35 40  
 41 Lys Val Ser Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu Glu  
 E--> 42 50 55 60  
 44 Thr Thr Thr Tyr Trp Gly Leu His Gly Glu Arg Asp Trp His Leu Gly  
 E--> 45 65 70 75  
 E--> 46 80  
 49 Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr Gln Val  
 E--> 50 85 90  
 E--> 51 95  
 53 Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe Asp Cys  
 E--> 54 100 105  
 E--> 55 110  
 57 Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg Val Ser  
 E--> 58 115 120 125  
 60 Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser Leu Gln  
 E--> 61 130 135 140  
 63 Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys Pro Pro  
 E--> 64 145 150 155

*misaligned amino  
acid numbers. See  
item 4  
on Enol  
summary sheet.  
(global env)*

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 PATENT APPLICATION: US/09/486,625        TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

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E--> 65 160
      67 Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys Pro Gln
E--> 68                               165                               170
E--> 69 175
      71 Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 72                               180                               185
E--> 73 190
      98 <210> SEQ ID NO: 4
      99 <211> LENGTH: 190
      100 <212> TYPE: PRT
      101 <213> ORGANISM: Artificial Sequence
      103 <220> FEATURE:
      104 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
      106 <400> SEQUENCE: 4
      107 Met Glu Asn Arg Trp Gln Val Ile Ile Val Trp Gln Val Asp Arg Met
E--> 108      1                               5                               10
E--> 109 15
      111 Arg Ile Arg Thr Trp Asn Ser Leu Val Lys Tyr His Met Tyr Ser Lys
E--> 112                               20                               25
E--> 113 30
      115 Lys Ala Arg Glu Trp Phe Tyr His His Tyr Gln Ser Pro His Pro Lys
E--> 116                               35                               40
      118 Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu Glu Ile
E--> 119                               50                               55                               60
      121 Thr Ser Phe Trp Gly Leu His Thr Gly Glu Arg Asp Trp His Leu Gly
E--> 122      65                               70                               75
E--> 123 80
      125 Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr His Val
E--> 126                               85                               90
E--> 127 95
      129 Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe Asp Cys
E--> 130                               100                               105
E--> 131 110
      133 Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg Val Ser
E--> 134                               115                               120                               125
      136 Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser Leu Gln
E--> 137                               130                               135                               140
      139 Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys Pro Pro
E--> 140 145                               150                               155
E--> 141 160
      143 Leu Ala Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys Pro Gln
E--> 144                               165                               170
E--> 145 175
      147 Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 148                               180                               185
E--> 149 190
      152 <210> SEQ ID NO: 5
      153 <211> LENGTH: 192
      154 <212> TYPE: PRT

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45 *same*  
*error*

RAW SEQUENCE LISTING                      DATE: 11/16/2000  
 PATENT APPLICATION: US/09/486,625        TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

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155 <213> ORGANISM: Artificial Sequence
157 <220> FEATURE:
158 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
160 <400> SEQUENCE: 5
161 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 162      1                      5                      10
E--> 163 15
165 Arg Ile Arg Thr Trp Asn Ser Leu Val Lys Tyr His Met Tyr Arg Ser
E--> 166      20                      25
E--> 167 30
169 Lys Lys Ala Arg Glu Trp Phe Tyr Arg His His Tyr Gln Ser Pro His
E--> 170      35                      40
172 Pro Arg Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
E--> 173      50                      55                      60
175 Glu Ile Thr Thr Tyr Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
E--> 176 65                      70                      75
E--> 177 80
179 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 180      85                      90
E--> 181 95
183 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 184      100                     105
E--> 185 110
187 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
E--> 188      115                     120                      125
190 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
E--> 191      130                     135                      140
193 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 194 145                     150                     155
E--> 195 160
197 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 198      165                     170
E--> 199 175
201 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 202      180                     185
E--> 203 190
205 <210> SEQ ID NO: 6
206 <211> LENGTH: 192
207 <212> TYPE: PRT
208 <213> ORGANISM: Artificial Sequence
210 <220> FEATURE:
211 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
213 <400> SEQUENCE: 6
214 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 215      1                      5                      10
E--> 216 15
218 Arg Ile Arg Thr Trp Asn Ser Leu Val Lys Tyr His Met Tyr Arg Ser
E--> 219      20                      25
E--> 220 30

```

*same*

*same*

RAW SEQUENCE LISTING  
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Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

222 Lys Lys Ala Arg Glu Trp Phe Tyr Arg His His Tyr Gln Ser Pro His
E--> 223          35                      40                      45
225 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
E--> 226          50                      55                      60
228 Glu Thr Thr Thr Tyr Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
E--> 229          65                      70                      75
E--> 230 80
232 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 233          85                      90
E--> 234 95
236 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 237          100                     105
E--> 238 110
240 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
E--> 241          115                     120                     125
243 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
E--> 244          130                     135                     140
246 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 247 145                     150                     155
E--> 248 160
250 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 251          165                     170
E--> 252 175
254 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 255          180                     185
E--> 256 190
258 <210> SEQ ID NO: 7
259 <211> LENGTH: 192
260 <212> TYPE: PRT
261 <213> ORGANISM: Artificial Sequence
263 <220> FEATURE:
264 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
266 <400> SEQUENCE: 7
267 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 268          1                      5                      10
E--> 269 15
271 Arg Ile Arg Thr Trp Asn Ser Leu Val Thr Tyr His Met Tyr Arg Ser
E--> 272          20                      25
E--> 273 30
275 Gln Lys Ala Arg Glu Trp Phe Asn Arg His His Tyr His Ser Pro His
E--> 276          35                      40                      45
278 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
E--> 279          50                      55                      60
281 Ala Ile Pro Thr Phe Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
E--> 282 65                      70                      75
E--> 283 80
285 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 286          85                      90
E--> 287 95

```

*same*

*same*

RAW SEQUENCE LISTING                      DATE: 11/16/2000  
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Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

289 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 290                      100                      105
E--> 291 110
293 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Le Gly His Arg
E--> 294                      115                      120                      125
296 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
E--> 297                      130                      135                      140
299 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 300 145                      150                      155
E--> 301 160
303 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 304                      165                      170
E--> 305 175
307 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 308                      180                      185
E--> 309 190
311 <210> SEQ ID NO: 8
312 <211> LENGTH: 192
313 <212> TYPE: PRT
314 <213> ORGANISM: Artificial Sequence
316 <220> FEATURE:
317 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
319 <400> SEQUENCE: 8
320 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 321                      1                      5                      10
E--> 322 15
324 Arg Ile Arg Thr Trp Asn Ser Leu Val Lys Tyr His Met Tyr Arg Ser
E--> 325                      20                      25
E--> 326 30
328 Lys Lys Ala Arg Glu Trp Phe Tyr Arg His His Tyr Gln Ser Pro His
E--> 329                      35                      40                      45
331 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
E--> 332                      50                      55                      60
334 Glu Ile Thr Thr Tyr Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
E--> 335 65                      70                      75
E--> 336 80
338 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 339                      85                      90
E--> 340 95
342 His Val Asp Pro Asp Leu Ala Asp His Leu Ile His Leu Cys Tyr Phe
E--> 343                      100                      105
E--> 344 110
346 Asp Cys Leu Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
E--> 347                      115                      120                      125
349 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
E--> 350                      130                      135                      140
352 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 353 145                      150                      155
E--> 354 160

```

*same*

*same*

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 PATENT APPLICATION: US/09/486,625        TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

356 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 357                               165                               170
E--> 358 175
360 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 361                               180                               185
E--> 362 190
364 <210> SEQ ID NO: 9
365 <211> LENGTH: 192
366 <212> TYPE: PRT
367 <213> ORGANISM: Artificial Sequence
369 <220> FEATURE:
370 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
372 <400> SEQUENCE: 9
373 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 374 1                               5                               10
E--> 375 15
377 Arg Ile Arg Thr Trp Asn Ser Leu Val Lys Tyr His Met Tyr Arg Ser
E--> 378                               20                               25
E--> 379 30
381 Lys Lys Ala Arg Glu Trp Phe Tyr Arg His His Tyr Gln Ser Pro His
E--> 382                               35                               40
384 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
E--> 385                               50                               55
387 Val Ile Thr Thr Tyr Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
E--> 388 65                               70                               75
E--> 389 80
391 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 392                               85                               90
E--> 393 95
395 His Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 396                               100                              105
E--> 397 110
399 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
E--> 400                               115                              120
402 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
E--> 403                               130                              135
405 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 406 145                              150                              155
E--> 407 160
409 Pro Pro Leu Ala Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 410                               165                               170
E--> 411 175
413 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 414                               180                               185
E--> 415 190
417 <210> SEQ ID NO: 10
418 <211> LENGTH: 192
419 <212> TYPE: PRT
420 <213> ORGANISM: Artificial Sequence

```

45

60

125

140





RAW SEQUENCE LISTING                      DATE: 11/16/2000  
 PATENT APPLICATION: US/09/486,625        TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

E--> 488          35          40          45
      490 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
E--> 491          50          55          60
      493 Val Ile Thr Thr Phe Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
E--> 494 65          70          75
E--> 495 80
      497 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 498          85          90
E--> 499 95
      501 His Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 502          100          105
E--> 503 110
      505 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
E--> 506          115          120          125
      508 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
E--> 509          130          135          140
      511 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 512 145          150          155
E--> 513 160
      515 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 516          165          170
E--> 517 175
      519 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 520          180          185
E--> 521 190
      523 <210> SEQ ID NO: 12
      524 <211> LENGTH: 192
      525 <212> TYPE: PRT
      526 <213> ORGANISM: Artificial Sequence
      528 <220> FEATURE:
      529 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
      531 <400> SEQUENCE: 12
      532 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 533 1          5          10
E--> 534 15
      536 Arg Ile Arg Thr Trp Asn Ser Leu Val Lys Tyr His Met Tyr Arg Ser
E--> 537          20          25
E--> 538 30
      540 Lys Lys Ala Arg Glu Trp Phe Asn Arg His His Tyr His Arg Pro His
E--> 541          35          40          45
      543 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
E--> 544          50          55          60
      546 Glu Ile Thr Thr Phe Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
E--> 547 65          70          75
E--> 548 80
      550 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 551          85          90
E--> 552 95
      554 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe

```

*same*

*same*

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 PATENT APPLICATION: US/09/486,625        TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

E--> 555                                      100                                      105
E--> 556 110
558 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
E--> 559                                      115                                      120                                      125
561 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
E--> 562                                      130                                      135                                      140
564 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 565 145                                      150                                      155
E--> 566 160
568 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 569                                      165                                      170
E--> 570 175
572 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 573                                      180                                      185
E--> 574 190
576 <210> SEQ ID NO: 13
577 <211> LENGTH: 192
578 <212> TYPE: PRT
579 <213> ORGANISM: Artificial Sequence
581 <220> FEATURE:
582 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
584 <400> SEQUENCE: 13
585 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 586                                      1                                      5                                      10
E--> 587 15
589 Arg Ile Arg Thr Trp Asn Ser Leu Val Lys Tyr His Met Tyr Arg Ser
E--> 590                                      20                                      25
E--> 591 30
593 Gln Lys Glu Arg Glu Trp Phe Asn Arg His His Tyr His Ser Pro His
E--> 594                                      35                                      40                                      45
596 Pro Glu Gln Ser Ser Thr Ala His Ile Pro Leu Val Asp Gly Arg Leu
E--> 597                                      50                                      55                                      60
599 Glu Lys Ile Ala Val Trp Ser Leu Asp Thr Gly Glu Gly Val Trp His
E--> 600 65                                      70                                      75
E--> 601 80
603 Arg Gly His Arg Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 604                                      85                                      90
E--> 605 95
607 Gln Val Asp Pro Asp Leu Val Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 608                                      100                                      105
E--> 609 110
611 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
E--> 612                                      115                                      120                                      125
614 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
E--> 615                                      130                                      135                                      140
617 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 618 145                                      150                                      155
E--> 619 160
621 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys

```

RAW SEQUENCE LISTING                      DATE: 11/16/2000  
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Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

E--> 622                                      165                                      170
E--> 623 175
625 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 626                                      180                                      185
E--> 627 190
629 <210> SEQ ID NO: 14
630 <211> LENGTH: 192
631 <212> TYPE: PRT
632 <213> ORGANISM: Artificial Sequence
634 <220> FEATURE:
635 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
637 <400> SEQUENCE: 14
638 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 639                                      1                                      5                                      10
E--> 640 15
642 Arg Ile Arg Thr Trp Asn Ser Leu Val Lys His His Met Tyr Val Ser
E--> 643                                      20                                      25
E--> 644 30
646 Lys Lys Ala Lys Lys Trp Phe Tyr Arg His His Tyr Glu Ser Pro His
E--> 647                                      35                                      40                                      45
649 Pro Lys Val Ser Ser Thr Ala His Ile Pro Leu Gly Asp Gly Arg Leu
E--> 650                                      50                                      55                                      60
652 Glu Lys Thr Ala Val Trp Ser Leu Gln Ala Gly Asp Gly Val Trp His
E--> 653 65                                      70                                      75
E--> 654 80
656 Arg Gly His Pro Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 657                                      85                                      90
E--> 658 95
660 Gln Val Asp Pro Asp Leu Val Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 661                                      100                                      105
E--> 662 110
664 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg
E--> 665                                      115                                      120                                      125
667 Val Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser
E--> 668                                      130                                      135                                      140
670 Leu Gln Tyr Leu Ala Leu Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 671 145                                      150                                      155
E--> 672 160
674 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 675                                      165                                      170
E--> 676 175
678 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 679                                      180                                      185
E--> 680 190
683 <210> SEQ ID NO: 15
684 <211> LENGTH: 191
685 <212> TYPE: PRT
686 <213> ORGANISM: Artificial Sequence
688 <220> FEATURE:

```

*same*

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/486,625  
 DATE: 11/16/2000  
 TIME: 16:24:01

Input Set : A:\PT0.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

689 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
691 <400> SEQUENCE: 15
692 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 693 1 5 10
E--> 694 15
696 Arg Ile Arg Ala Trp Asn Ser Leu Val Lys His His Met Tyr Val Ser
E--> 697 20 25
E--> 698 30
700 Lys Lys Ala Arg Thr Trp Phe Ser Arg His His Tyr Gly Ser Pro His
E--> 701 35 40 45
703 Pro Lys Val Cys Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu
E--> 704 50 55 60
706 Val Ile Thr Thr Tyr Trp Ser Leu His Ala Gly Glu Asp Trp His Val
E--> 707 65 70 75
E--> 708 80
710 Gly Gln Arg Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr Gln
E--> 711 85 90
E--> 712 95
714 Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe Asp
E--> 715 100 105
E--> 716 110
718 Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg Val
E--> 719 115 120 125
721 Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser Leu
E--> 722 130 135 140
724 Gln Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys Pro
E--> 725 145 150 155
E--> 726 160
728 Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys Pro
E--> 729 165 170
E--> 730 175
732 Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 733 180 185
E--> 734 190
737 <210> SEQ ID NO: 16
738 <211> LENGTH: 192
739 <212> TYPE: PRT
740 <213> ORGANISM: Artificial Sequence
742 <220> FEATURE:
743 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
745 <400> SEQUENCE: 16
746 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 747 1 5 10
E--> 748 15
750 Arg Ile Arg Ala Trp Asn Ser Leu Val Lys His His Thr Tyr Phe Ser
E--> 751 20 25
E--> 752 30
754 Lys Lys Ala Lys Lys Trp Phe Tyr Arg His His Tyr Glu Ser Pro His
E--> 755 35 40 45

```

*same*

*same*

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/486,625  
 DATE: 11/16/2000  
 TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

757 Pro Asn Val Ser Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu
E--> 758      50      55      60
760 Val Thr Thr Pro Tyr Trp Gly Leu His Gly Gly Glu Arg Asp Trp Tyr
E--> 761 65      70      75
E--> 762 80
764 Leu Ala Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 765      85      90
E--> 766 95
768 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 769      100      105
E--> 770 110
772 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg
E--> 773      115      120      125
775 Val Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser
E--> 776      130      135      140
778 Leu Gln Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 779 145      150      155
E--> 780 160
782 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 783      165      170
E--> 784 175
786 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 787      180      185
E--> 788 190
790 <210> SEQ ID NO: 17
791 <211> LENGTH: 192
792 <212> TYPE: PRT
793 <213> ORGANISM: Artificial Sequence
795 <220> FEATURE:
796 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
798 <400> SEQUENCE: 17
799 Met Glu Asn Arg Trp Glu Val Met Ile Val Trp Glu Val Asp Arg Met
E--> 800 1      5      10
E--> 801 15
803 Arg Ile Arg Ala Trp Asn Ser Leu Val Lys His His Met Tyr Val Ser
E--> 804      20      25
E--> 805 30
807 Lys Lys Ala Lys Lys Trp Phe Tyr Arg His His Tyr Glu Ser Pro His
E--> 808      35      40      45
810 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu
E--> 811      50      55      60
813 Val Ile Thr Thr Tyr Trp Gly Leu His Ala Gly Glu Arg Asp Trp His
E--> 814 65      70      75
E--> 815 80
817 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 818      85      90
E--> 819 95
821 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 822      100      105

```

*same*

*same*

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/486,625

DATE: 11/16/2000  
 TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

E--> 823 110
      825 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg
E--> 826          115          120          125
      828 Val Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser
E--> 829          130          135          140
      831 Leu Gln Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 832 145          150          155
E--> 833 160
      835 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 836          165          170
E--> 837 175
      839 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 840          180          185
E--> 841 190
      843 <210> SEQ ID NO: 18
      844 <211> LENGTH: 192
      845 <212> TYPE: PRT
      846 <213> ORGANISM: Artificial Sequence
      848 <220> FEATURE:
      849 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
E--> 851 <400> SEQUENCE: 17
      852 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 853 1          5          10
E--> 854 15
      856 Arg Ile Arg Ala Trp Asn Ser Leu Val Lys His His Met Tyr Val Ser
E--> 857          20          25
E--> 858 30
      860 Lys Asn Ala Lys Lys Trp Phe Tyr Arg His His Tyr Asp Ser Pro His
E--> 861          35          40          45
      863 Pro Val Gln Ser Ser Thr Ala His Ile Pro Leu Gly Asp Gly Arg Leu
E--> 864          50          55          60
      866 Gln Lys Ile Ala Phe Trp Ser Leu Asp Ala Gly Glu Arg Asp Trp His
E--> 867 65          70          75
E--> 868 80
      870 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 871          85          90
E--> 872 95
      874 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 875          100          105
E--> 876 110
      878 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg
E--> 879          115          120          125
      881 Val Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser
E--> 882          130          135          140
      884 Leu Gln Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 885 145          150          155
E--> 886 160
      888 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 889          165          170

```

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/486,625  
 DATE: 11/16/2000  
 TIME: 16:24:01

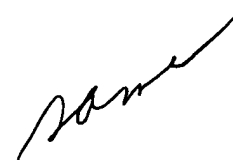
Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

E--> 890 175
      892 Pro Gln Lys Thr Lys Gly His Arg Gly Arg His Thr Met Asn Gly His
E--> 893              180              185
E--> 894 190
      896 <210> SEQ ID NO: 19
      897 <211> LENGTH: 192
      898 <212> TYPE: PRT
      899 <213> ORGANISM: Artificial Sequence
      901 <220> FEATURE:
      902 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
      904 <400> SEQUENCE: 19
      905 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 906      1              5              10
E--> 907 15
      909 Arg Ile Arg Ala Trp Asn Ser Leu Val Lys His His Met Tyr Val Ser
E--> 910              20              25
E--> 911 30
      913 Lys Lys Ala Lys Lys Trp Phe Tyr Arg His His Tyr Asp Ser Pro His
E--> 914              35              40
      916 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu
E--> 917      50              55              60
      919 Glu Thr Thr Thr Tyr Trp Gly Leu His Ala Gly Glu Arg Asp Trp His
E--> 920      65              70              75
E--> 921 80
      923 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 924              85              90
E--> 925 95
      927 His Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 928              100              105
E--> 929 110
      931 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg
E--> 932              115              120              125
      934 Val Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser
E--> 935      130              135              140
      937 Leu Gln Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 938 145              150              155
E--> 939 160
      941 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 942              165              170
E--> 943 175
      945 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 946              180              185
E--> 947 190
      949 <210> SEQ ID NO: 20
      950 <211> LENGTH: 192
      951 <212> TYPE: PRT
      952 <213> ORGANISM: Artificial Sequence
      954 <220> FEATURE:
      955 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence

```

45



RAW SEQUENCE LISTING                      DATE: 11/16/2000  
 PATENT APPLICATION: US/09/486,625        TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

957 <400> SEQUENCE: 20
958 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 959 1 5 10
E--> 960 15
962 Thr Ile Arg Ala Trp Asn Ser Leu Val Lys His His Met Tyr Val Ser
E--> 963 20 25
E--> 964 30
966 Lys Lys Ala Lys Lys Trp Phe Tyr Arg His His Tyr Glu Ser Pro His
E--> 967 35 40 45
969 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu
E--> 970 50 55 60
972 Val Ile Thr Thr Tyr Trp Gly Leu His Ala Gly Glu Arg Asp Trp His
E--> 973 65 70 75
E--> 974 80
976 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 977 85 90
E--> 978 95
980 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Thr His Leu Tyr Tyr Phe
E--> 981 100 105
E--> 982 110
984 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg
E--> 985 115 120 125
987 Val Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser
E--> 988 130 135 140
990 Leu Gln Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 991 145 150 155
E--> 992 160
994 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 995 165 170
E--> 996 175
998 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 999 180 185
E--> 1000 190
1002 <210> SEQ ID NO: 21
1003 <211> LENGTH: 188
1004 <212> TYPE: PRT
1005 <213> ORGANISM: Artificial Sequence
1007 <220> FEATURE:
1008 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
1010 <400> SEQUENCE: 21
1011 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 1012 1 5 10
E--> 1013 15
1015 Arg Ile Arg Ala Trp Asn Ser Leu Val Lys His His Met Tyr Val Ser
E--> 1016 20 25
E--> 1017 30
1019 Lys Lys Ala Lys Lys Trp Phe Asn Arg His His Tyr Asp Arg Pro His
E--> 1020 35 40 45
1022 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu

```

*same*

*same*



RAW SEQUENCE LISTING                      DATE: 11/16/2000  
 PATENT APPLICATION: US/09/486,625        TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

E--> 1023      50                      55                      60
      1025 Glu Ile Thr Thr Phe Trp Gly Leu His Ala Gly Glu Arg Asp Trp His
E--> 1026      65                      70                      75
E--> 1027      80
      1029 Leu Gly Gln Arg Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 1030                      85                      90
E--> 1031      95
      1033 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Thr His Leu Tyr Tyr Phe
E--> 1034                      100                      105
E--> 1035     110
      1037 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg
E--> 1038                      115                      120                      125
      1040 Val Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser
E--> 1041                      130                      135                      140
      1043 Leu Gln Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 1044     145                      150                      155
E--> 1045     160
      1047 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 1048                      165                      170
E--> 1049     175
      1051 Pro Gln Lys Thr Lys Gly Thr Glu Gly Ala Ile Gln
E--> 1052                      180                      185
      1055 <210> SEQ ID NO: 22
      1056 <211> LENGTH: 192
      1057 <212> TYPE: PRT
      1058 <213> ORGANISM: Artificial Sequence
      1060 <220> FEATURE:
      1061 <223> OTHER INFORMATION: Description of Artificial Sequence: Novel Sequence
      1063 <400> SEQUENCE: 22
      1064 Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
E--> 1065      1                      5                      10
E--> 1066     15
      1068 Arg Ile Arg Ala Trp Asn Ser Leu Val Lys His His Met Phe Val Ser
E--> 1069                      20                      25
E--> 1070     30
      1072 Lys Lys Ala Lys Lys Trp Phe Tyr Arg His His Tyr Glu Ser Pro His
E--> 1073                      35                      40                      45
      1075 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu
E--> 1076                      50                      55                      60
      1078 Glu Ile Thr Thr Phe Trp Gly Leu His Ala Gly Glu Arg Asp Trp His
E--> 1079     65                      70                      75
E--> 1080     80
      1082 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
E--> 1083                      85                      90
E--> 1084     95
      1086 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
E--> 1087                      100                      105
E--> 1088    110
      1090 Gly Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg

```

*same*

*same*

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/486,625  
 DATE: 11/16/2000  
 TIME: 16:24:01

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

```

E--> 1091          115          120          125
      1093 Val Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser
E--> 1094          130          135          140
      1096 Leu Gln Tyr Leu Gly Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
E--> 1097 145          150          155
E--> 1098 160
      1100 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
E--> 1101          165          170
E--> 1102 175
      1104 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
E--> 1105          180          185
E--> 1106 190

```

*same*

*FYI!*

**The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.**

VERIFICATION SUMMARY                      DATE: 11/16/2000  
 PATENT APPLICATION: US/09/486,625        TIME: 16:24:02

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\11162000\I486625.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application Number  
 L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
 L:31 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1  
 M:332 Repeated in SeqNo 1  
 L:108 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:4  
 M:332 Repeated in SeqNo 4  
 L:162 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:5  
 M:332 Repeated in SeqNo 5  
 L:215 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:6  
 M:332 Repeated in SeqNo 6  
 L:268 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:7  
 M:332 Repeated in SeqNo 7  
 L:321 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:8  
 M:332 Repeated in SeqNo 8  
 L:374 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:9  
 M:332 Repeated in SeqNo 9  
 L:427 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:10  
 M:332 Repeated in SeqNo 10  
 L:480 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:11  
 M:332 Repeated in SeqNo 11  
 L:533 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:12  
 M:332 Repeated in SeqNo 12  
 L:586 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:13  
 M:332 Repeated in SeqNo 13  
 L:639 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:14  
 M:332 Repeated in SeqNo 14  
 L:693 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:15  
 M:332 Repeated in SeqNo 15  
 L:747 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16  
 M:332 Repeated in SeqNo 16  
 L:800 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:17  
 M:332 Repeated in SeqNo 17  
 L:851 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:18 differs:17  
 L:853 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:17  
 M:332 Repeated in SeqNo 18  
 L:906 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:19  
 M:332 Repeated in SeqNo 19  
 L:959 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:20  
 M:332 Repeated in SeqNo 20  
 L:1012 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:21  
 M:332 Repeated in SeqNo 21  
 L:1065 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:22  
 M:332 Repeated in SeqNo 22  
 L:1118 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:23  
 M:332 Repeated in SeqNo 23  
 L:1171 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:24  
 L:1183 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:25  
 L:1195 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:26